

**AMENDMENTS TO THE CLAIMS**

Please amend claim 2 and add claims 10 through 14, as follows:

1       1. (Original) A cathode material for an electron beam apparatus, the cathode material  
2       consisting essentially of:

3              a rare earth metal of the cerium group comprising 0.5% to 9.0% of the total weight of the  
4       cathode material;

5              at least one element selected from the group consisting of tungsten and rhenium, comprising  
6       0.5% to 15.0% of the total weight of the cathode material;

7              carbon comprising 0.5% to 10% of the total weight of the cathode material; and  
8       iridium.

1       2. (Currently Amended) The cathode material of claim 1, with the rare earth metal of the  
2       cerium group being at least one element selected from the group consisting of ~~lanthanum~~ lanthanum,  
3       cerium, praseodymium, neodymium and samarium.

1       3. (Original) The cathode material of claim 1, with the carbon content being 2% to 5% by  
2       weight based on the total weight of the cathode material.

1       4. (Original) The cathode material of claim 1, with about 6% by weight of a rare earth metal

2       of the cerium group, about 5% by weight of tungsten or rhenium or both tungsten and rhenium, and  
3       about 3% by weight of carbon, based on the total weight of the cathode material.

1           5. (Original) A cathode material for an electron beam apparatus, comprising:

2           a rare earth metal of the cerium group;  
3           at least one element selected from the group consisting of tungsten and rhenium;  
4           carbon of about 0.5% to about 10% of the total weight of the cathode material; and  
5           iridium.

1           6. (Original) The cathode material of claim 5, with the rare earth metal of the cerium group

2       of about 0.5% to about 9.0% of the total weight of the cathode material.

1           7. (Original) The cathode material of claim 6, with the carbon content being about 2% to

2       about 5% by weight based on the total weight of the cathode material.

1           8. (Original) The cathode material of claim 6, with at least one element selected from the

2       group consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight  
3       of the cathode material.

1           9. (Original) The cathode material of claim 8, with the carbon content being about 2% to .

2       about 5% by weight based on the total weight of the cathode material.

1       10. (New) The cathode material of claim 2, with the carbon content being 2% to 5% by  
2       weight based on the total weight of the cathode material.

1       11. (New) The cathode material of claim 2, with about 6% by weight of a rare earth metal  
2       of the cerium group, about 5% by weight of tungsten or rhenium or both tungsten and rhenium, and  
3       about 3% by weight of carbon, based on the total weight of the cathode material.

1       12. (New) The cathode material of claim 5, with the carbon content being about 2% to about  
2       5% by weight based on the total weight of the cathode material.

1       13. (New) The cathode material of claim 12, with at least one element selected from the  
2       group consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight  
3       of the cathode material.

1       14. (New) The cathode material of claim 5, with at least one element selected from the group  
2       consisting of tungsten and rhenium comprising about 0.5% to about 15.0% of the total weight of  
3       the cathode material.